

AMENDMENTS TO THE CLAIMS

Please cancel claims 6-8 and 20 without prejudice or disclaimer.

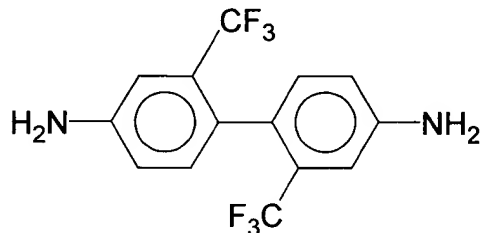
This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

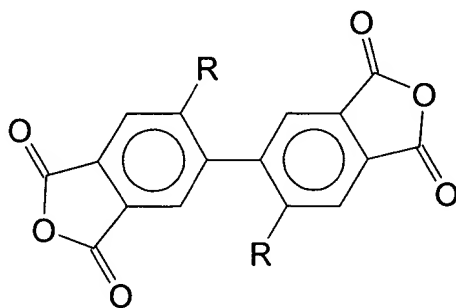
Claim 1 (currently amended): An insulated integrated circuit comprising:

An integrated circuit; and

An insulating layer having a dielectric constant of less than about 2.5 is disposed on said integrated circuit, wherein said insulating layer is a polyimide film that is the polymerization product of polymerization product of an aromatic diamine having the general formula (I):

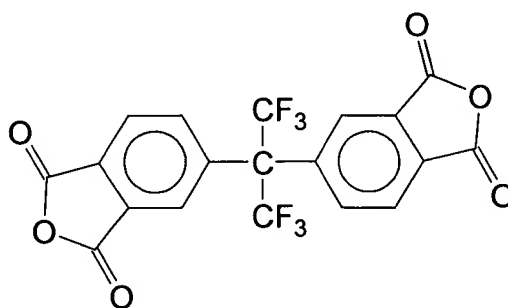


and an aromatic dianhydride having the formula (II):

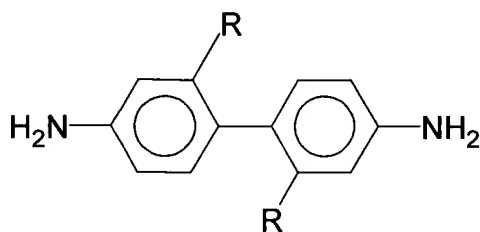


wherein R is an organic substituent selected from the group consisting of CF₃, o-trifluoromethyl phenyl, m-trifluoromethyl phenyl, p-trifluoromethyl phenyl and 3,5 bis[(m-trifluoromethyl) phenyl]; or

the polymerization product of an ormatic dianhydride having the general formula (III):



and an aromatic diamine having the formula (IV):



wherein R is a substituent selected from the group consisting of trifluoromethyl, o-trifluoromethyl phenyl, m-trifluoromethyl phenyl, p-trifluoromethyl phenyl and 3,5'-bis[(m-trifluoromethyl) phenyl];

further wherein the dielectric constant of said insulating layer is less than about 2.5.

Claim 2 (original): The insulated integrated circuit according to claim 1, wherein said integrated circuit is a microprocessor.

Claim 3 (original): The insulated integrated circuit according to claim 1, wherein the thickness of said insulating layer is from about 10 to about 1000 microns.

Claim 4 (original): The insulated integrated circuit according to claim 1, wherein the thickness of said insulating layer is from about 10 to about 500 microns.

Claim 5 (original): The insulated integrated circuit according to claim 1, wherein the thickness of said insulating layer is from about 10 to about 100 microns.

Claims 6-8 (canceled)

Claim 9 (original): The insulated integrated circuit according to claim 1, wherein the coefficient of thermal expansion is greater than about $23 \times 10^{-6}/^{\circ}\text{C}$.

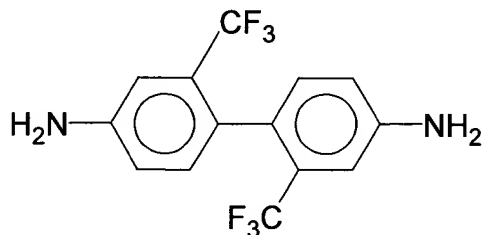
Claim 10 (original): The insulated integrated circuit according to claim 1, wherein the coefficient of thermal expansion is greater than about $42 \times 10^{-6}/^{\circ}\text{C}$.

Claim 11 (original): The insulated integrated circuit according to claim 1, wherein the coefficient of thermal expansion is greater than about $50 \times 10^{-6}/^{\circ}\text{C}$.

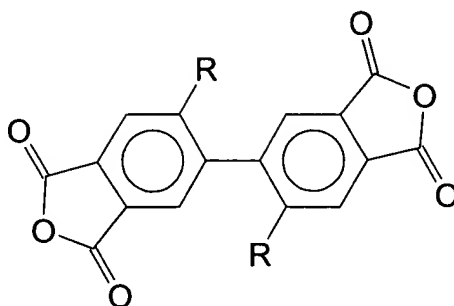
Claim 12 (currently amended): An insulated electrically conductive component comprising:

an electrically conductive component; and

an insulating layer comprising ~~comprising~~ the polymerization product of an aromatic diamine having the general formula (I):

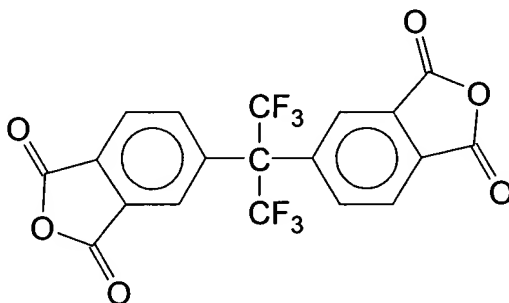


and an aromatic dianhydride having the formula (II):

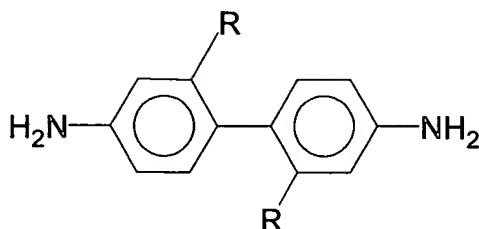


wherein R is an organic substituent selected from the group consisting of CF_3 , o-trifluoromethyl phenyl, m-trifluoromethyl phenyl, p-trifluoromethyl phenyl and 3,5-bis[(m-trifluoromethyl) phenyl]; or

the polymerization product of an aromatic dianhydride having the general formula (III):



and an aromatic diamine having the formula (IV):



wherein R is a substituent selected from the group consisting of trifluoromethyl, o-trifluoromethyl phenyl, m-trifluoromethyl phenyl, p-trifluoromethyl phenyl and 3,5'-bis[(m-trifluoromethyl) phenyl],
wherein

the coefficient of thermal expansion of the insulated electrically conductive component is greater than about $23 \times 10^{-6}/^{\circ}\text{C}$.

Claim 13 (currently amended): The insulated electrically conductive component according to claim 12, wherein said electrically conductive component is selected from the group consisting of ~~comprising~~ capacitors, diodes, connectors and transistors.

Claim 14 (original): The insulated electrically conductive component according to claim 12, wherein the thickness of said insulating layer is from about 10 to about 1000 microns.

Claim 15 (original): The insulated electrically conductive component according to claim 12, wherein the thickness of said insulating layer is from about 10 to about 500 microns.

Claim 16 (original): The insulated electrically conductive component according to claim 12, wherein the thickness of said insulating layer is from about 10 to about 100 microns.

Claim 17 (original): The insulated electrically conductive component according to claim 12, wherein the dielectric constant of said insulating layer is less than about 2.8.

Claim 18 (original): The insulated electrically conductive component according to claim 12, wherein the dielectric constant of said insulating layer is less than about 2.7.

Claim 19 (original): The insulated electrically conductive component according to claim 12, wherein the dielectric constant of said insulating layer is less than about 2.5.

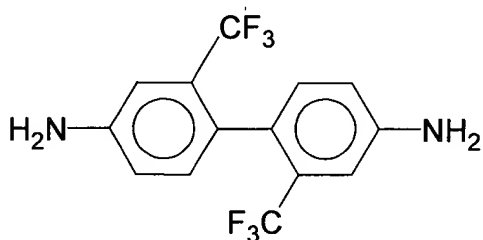
Claim 20 (canceled)

Claim 21 (original): The insulated electrically conductive component according to claim 12, wherein the coefficient of thermal expansion is greater than about $42 \times 10^{-6}/^{\circ}\text{C}$.

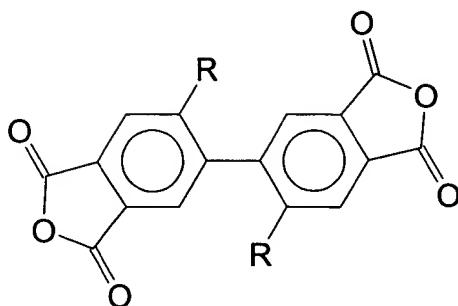
Claim 22 (original): The insulated electrically conductive component according to claim 1, wherein the coefficient of thermal expansion is greater than about $50 \times 10^{-6}/^{\circ}\text{C}$.

Claim 23 (currently amended): A method of coating an integrated circuit comprising the steps of:

preparing a polyimide comprising the polymerization product of an aromatic diamine having the general formula (I):

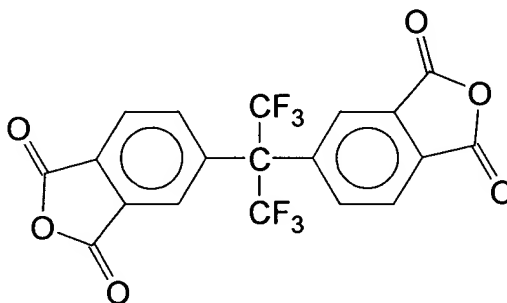


and an aromatic dianhydride having the formula (II):

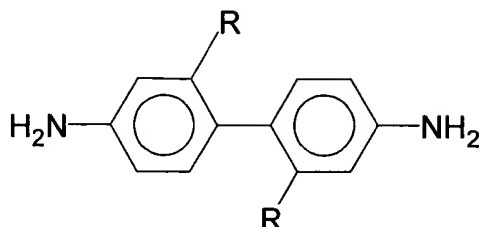


wherein R is an organic substituent selected from the group consisting of CF₃, o-trifluoromethyl phenyl, m-trifluoromethyl phenyl, p-trifluoromethyl phenyl and 3,5-bis[(m-trifluoromethyl) phenyl]; or

the polymerization product of an aromatic dianhydride having the general formula (III):



and an aromatic diamine having the formula (IV):



wherein R is a substituent selected from the group consisting of trifluoromethyl, o-trifluoromethyl phenyl, m-trifluoromethyl phenyl, p-trifluoromethyl phenyl and 3,5'-bis[(m-trifluoromethyl) phenyl];

applying the polyimide dispersed within ~~the~~ an organic solvent to the surface of the integrated circuit forming a thin insulating layer or film on the surface of the circuit; and

heating the integrated circuit with the insulating polyimide layer or film disposed thereon to a temperature sufficient to evaporate the organic solvent and to cure the polyimide.

Claim 24 (original): The method according to claim 23, wherein the step of applying includes one of spraying, dipping, spin-coating, brush-coating and flow-coating.

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Response Dated December 16, 2003
Reply to Office Action of July 30, 2003

Claim 25 (currently amended): The method according to claim 23, wherein the organic solvent is selected ~~from~~ from the group consisting of acetone, cyclopentanone, tetrahydrofuran (THF), N,N'-dimethylacetamide (DMAc), N,N'-dimethylformamide (DMF), N-methylpyrrolidone (NMP) p-chlorophenol and m-cresol.